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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,891	08/01/2003	Shaupoh Wang	42173/011	3058

29493 7590 04/04/2006  
HUSCH & EPPENBERGER, LLC  
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ST. LOUIS, MO 63105-3441

EXAMINER

HWU, DAVIS D

ART UNIT PAPER NUMBER

3752

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/632,891

Applicant(s)

WANG ET AL.

Examiner

Davis D. Hwu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17, 19-24 and 26-29 is/are pending in the application.  
4a) Of the above claim(s) 2-13 and 16 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 14, 15, 19, 20, 23, 24 and 26-29 is/are rejected.  
7) ☒ Claim(s) 17, 21 and 22 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

***Response to Amendment***

1. Applicant's amendment and arguments of February 21, 2006 are acknowledged and entered and have been fully considered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

3. Claims 1, 14, 15, 19, 20, 23, 24 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sickles in view of Lasley.

Sickles discloses an aerosol spray apparatus which carries out the method comprising providing a grounded nozzle 3 and an electrode 15 separated by a predetermined distance (Column 5, lines 27-29), placing the electrode at a high electrical potential relative the nozzle, either of positive or negative polarity as recited, ejecting a liquid or powder from the nozzle towards the electrode to atomize the ejected liquid or powder into aerosol droplets or particles as recited, the aerosol droplets or particles obtaining an induced electric charge which is of the same polarity as the high voltage electrode after the aerosol droplets or particles pass the vicinity of the electrode, forming a directed spray of aerosol droplets or particles as recited, providing a grounded conductive cover around the nozzle and the electrode, the cover having an opening as recited in claim 17. Lasley teaches a spraying device comprising an electrode 30 which is separated from a nozzle 15 by a predetermined axial distance. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Sickles by placing the electrode at a predetermined axial

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distance from the nozzle as taught, since such a modification would have involved a mere change of the placement of an object which involves only routing skill in the art since such a modification still carries out the method of charging the spray. Regarding claim 20 the resistivity range as recited is a matter of design choice based on the particular application of the device various liquids or powders will have different resistivity requirements. The distances recited in claims 26-29 are also matters of design choice based on user preference.

***Allowable Subject Matter***

5. Claims 17, 21 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Sickles discloses that charging means could extend forward of the plane of the discharge ports but that this positioning is not generally desirable for various reasons as stated by the Applicant. Such positioning however has also been taught by others having ordinary skill in the art and those having ordinary skill in the art would recognize that the charging means would have to be cleaned periodically regardless of its position. Thus, one having ordinary skill in the art would recognize that the electrode could be placed a predetermined axial distance from the nozzle as taught by Lasley.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP


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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davis D. Hwu whose telephone number is 571-272-4904. The examiner can normally be reached on 8:00-4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on 571-272-4919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Davis Hwu



**DAVIS HWU**  
**PRIMARY EXAMINER**